BOLERO

Instruction Manual
Manuel d'instruction
Handleiding
Bedienungsanleitung

ADB
Lighting Technologies

M 1030

1106.01.030

Instruction Manual

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Delivery - Unpacking

Upon delivery of your equipment, open the packaging carefully and examine the material.
If you observe any damage, contact the shipping company immediately, and have your complaint duly recorded. You may rest assured that your equipment left the factory in perfect condition.

Check whether what you have received is in conformity with the delivery notice, and whether the notice is in conformity with your order.
In the event of any error, contact your shipper immediately to clarify the situation and receive full satisfaction.

If you find nothing wrong, replace the material in the packing and store it in a warm place, away from dust and humidity, while awaiting final installation.
Never leave the material on the worksite under any circumstance.

Generalities - Safety

The equipment is built in accordance with European safety standards and requires imperatively a safety earth connection in compliance with local regulations.
To prevent any risk of electric shock, do not remove any cover or part of the enclosure.

Access to internal parts is not required for normal operation.
Refer servicing to skilled and trained service personnel exclusively.
Disconnect from the power supply prior to opening for inspection or service.

WARNING ! LETHAL VOLTAGES ARE PRESENT INSIDE

Connection to an inappropriate power source may irreversibly damage the equipment, it is the user's responsibility to use the equipment for its intended purpose and to check the equipment connected to it.

To obtain full benefits of the safety measures, the equipment shall be installed and serviced by skilled and trained personnel exclusively.

Don't make any modification to the equipment.

ADB shall not accept any liability for material damages or injuries which may result from unauthorised modifications.

Important Notice for Power Cables

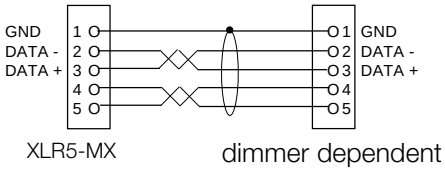
Power supply cables and connectors are an important part of your equipment and contribute to its safety.

- always use an isolator or main circuit-breaker, or main fuses to interrupt the link; never pull on the cable
- do not damage the cable nor the connectors in any way, check them at each installation or at regular intervals in a permanent installation
- do not tie together power supply cables and signal cables

Installation

The BOLERO is a professional lighting control desk, developed as per EN60950 safety standard. It is a class 1 equipment designed and manufactured to EN60950. To prevent any risk of electric shock do not open the desk, there are no user serviceable parts inside. Refer servicing to trained service personnel exclusively.

Signal Connections



Cable : x 2 x 0,34 mm^2 shielded
Max. length : 250 m

To enhance safety and operating reliability this product has been fitted with galvanic isolation on the DMX512/1990 output. This isolation has been tested for 500V dc in order to prevent grounding loop problems or to transfer low voltages occasionally present on some signals to controls or other signal connectors accessible to the user.

It is absolutely forbidden to apply any voltage to the connections of the BOLERO (Aux, DMX and Analogue outputs). Connections to inappropriate sources may inadvertently damage the BOLERO and may be dangerous to the user. It is the user's responsibility to use the equipment for it's intended purpose and to check the equipement connected to it.

The BOLERO is a professional equipment developed with simplicity of use in mind. However, in order to fully benefit from the designed in safety features, the equipment shall be installed and serviced by skilled and trained personnel exclusively.

Technical Specifications

Power supply : 220V - 240V, 50 Hz ± 1 %.
Mechanical dimensions (mm) (width x depth x height) :

	BOLERO 12	BOLERO 24
Packed	530 x 340 x 130	760 x 340 x 130
Unpacked	500 x 315 x 118	730 x 315 x 118

Options and Accessories

- Conversion card for 370uA or 0/+10V analogue output (24 channels).
- Conversion card for 370uA or 0/+10V analogue output (48 channels).
- 5 pin DIN male connector for remote control.
- Dust cover for BOLERO 12.
- Dust cover for BOLERO 24.

Unpacking the desk

After removing the desk from it's box, check that the following items are included :

- 1 BOLERO desk
- 1 User manual (this document)
- 1 * 5 pin XLR male connector for DMX512/1990 signal

If any of the previous items are missing contact your supplier immediately. Retain the box and packing material for any future transportation or storage of the desk.

Precautions

WARNING
To prevent fire or shock hazard, do not expose these units to rain or moisture.

Caution

Disconnect the mains plug from the supply socket when not in use.

Avoid using the desk under the following conditions :

- Extremely hot, cold or humid places,

Ambient temperature	:	0 to 40 °C
Storage	:	- 10 to 50 °C
Maximum gradient	:	5 °C per hour
Humidity	:	30 % to 70 % RH without condensation.

- Dusty places,

Be careful of moisture condensation.
Avoid using the desk immetiately after moving from a cold place to a warm place or soon after heating a room which was cold.

Handle the desk carefully.

- Do not place anything heavy on the desk.

- Do not place anything which could spill and cause problems on or near the desk.

Connecting to the back panel

The only connection required to operate the desk is for the power cable to be plugged into the power socket on the back panel, and the power plug to be connected to a suitable mains outlet. However if any output is needed then a suitable cable needs to be linked from the DMX512/1990 output socket to a recommended DMX512/1990 controlled dimmer unit.

«GRAND MASTER»

USING THE Grand Master SECTION

The Grand Master section controls the output of the desk.

If the «ON/OFF» button is pressed then all output from the desk is off, and the LED above the button is off.

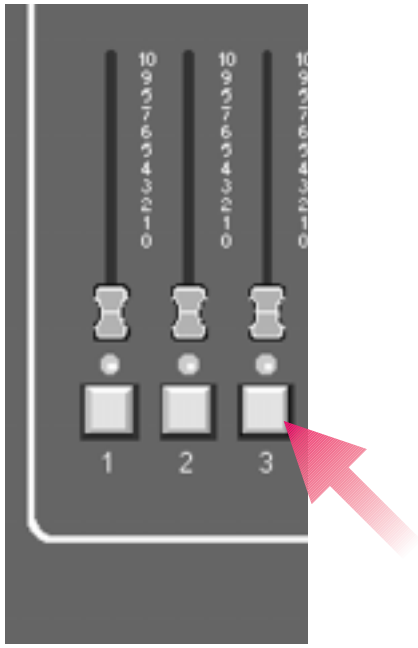
A second press of the button restores the output, and illuminates the LED.

The Grand Master fader controls the overall output level of the desk.

In it's lowest position (0) the output is off, as if the «ON/OFF» button had been pressed. In it's highest position (10) output is at maximum.

Any position beween these two will provide an output of between 0% and 100% depending on the position of the fader.

Manual Section



Flash Keys

Each pair or MANUAL section faders has associated with it a «FLASH» button.

Each «FLASH» button will flash the output of it's associated channel, and the corresponding LED will light.

The output from a«FLASH» button press is dependant only on the position of the Grand Master fader, and whether the Grand Master section «ON/OFF» button is on.

Generating Manual Output

Each group of Preset faders has a master control fader and on/off button. The master for Preset B works in reverse of that for Preset A, i.e. 100% is at the bottom and 0% is at the top of its travel, for Preset B. The «ON/OFF» buttons work in a similar fashion to the Grand Master «ON/OFF» button, in that they control whether the output from their respective Preset group is blacked out (LED off) or not.

Assuming that all the Preset faders are at the bottom of their travel and that the Preset A master fader is set to a value above 0 and that the «ON/OFF» button has not been pressed, i.e. the LED is on. Also that the Grand Master fader is above 0 and it's associated «ON/OFF» button has not been pressed. Moving a Preset fader off of 0 will produce an output on that channel. If a dimmer unit is connected to the output the lamp on that channel will light. Increasing the level of the Preset fader will increase the light level of the lamp. Once the output level increases above a 10% the LED below the Preset fader will light. Also if the Preset master fader is over 10% the Preset A bank LED will light to show that the Preset is active. Moving more Preset faders will light more lamps on the corresponding output channels as well as the LED's below the faders on the desk.

Once a display of illuminated lamps has been created on the output the level of these lamps may be varied in several ways.

- By moving each individual fader to vary it's output level.
- By changing the position of the Preset master fader to after the output level of all the active Preset channels.
- By moving the Grand Master fader to change the output level of the desk.

The action of the master fader is governed by the setting of the manual timer control. If we consider the movement of the master fader, and call the start position posn. A and the end position posn. B. If the timer is set to 0 then the output will change in time with the movement of the master fader. If the timer is set to anything else then the output will change from the posn. A to posn. B fader setting's in the time set. Whilst the output is still changing from one setting to the other the RUN A LED above the timer will flash to show that the fade is still in progress. If the master fader is moved again, say to posn. C, whilst a fade is in progress then the fade restarts, at the new time setting (if changed), from posn. B to posn. C.

Note :
If the manual timer control is moved whilst a fade is in progress then the fade will restart from it's current position to it's final position but will take into account the percentage complete of the current fade i.e. If the fade was 50% complete and the manual timer was moved to 18 seconds the fade would take a further 9 seconds to complete.

At any stage the output may be blacked out by using either of the «ON/OFF» buttons, in the maunal Preset A, manual Preset B or the Grand Master sections. A Blackout state may also be achieved by moving either master fader to 0. If a blackout is initiated, by pressing one of the relevant «ON/OFF» buttons, whilst a fade is in progress, the fade will continue to it's end.

Dual Preset

Dual Presets allow for the creation of two output settings on two different banks of faders, Preset A and Preset B. Either or both presets may be output from the desk with the highest value of each channel taking precedence.The active Preset(s) are shown by illuminating the corresponding LED. Either Preset may be blacked out using the corresponding «ON/OFF» button and the output level of each Preset is determined by the two master faders, labelled A and B.

Assume an output pattern has been created on both banks of faders and that Preset A is currently active, i.e. both master faders are at the top of their travel, and the timer control is set to 10 secs. A dip-less cross fade can be made from Preset A to Preset B simply by sliding both master faders together from the top to the bottom of their travel. Preset A will fade out as Preset B fade's in. The total fade will take 10 seconds and during this time both the RUN A and RUN B LED's above timer control will flash showing a fade is in progress. Once complete a new output pattern may be created on the Preset A bank of faders and the process reversed, i.e. the master faders moved from the bottom to the top of their travel, to fade the new pattern in.

Note :
A dip-less cross fade will constantly compare the value of the two faders relating to each channel. The highest value will always take precedence, i.e. the output value will never fall below that of the initial fader value.

Effect Section

A pre-programmed chase sequence may be selected from those available. The patterns available depend on whether a BOLERO 12 or a BOLERO 24 is being used. For the BOLERO 12 chase patterns 1 to 12 are available. On the BOLERO 24 patterns 1 to 24 may be used. The channels over which the chase runs may be individually selected.

The Effect section controls use is detailed below.

The Channel Buttons

This button selects the channels over which the chosen pattern will operate. After pressing the button the manual section LEDs and flash buttons are used to select which channels are incorporated. Pressing a flash key will toggle that channel between being in or out of the chase range. If the LED is lit then that channel will be included. The desk will remember not only whith channels to include but in which order they were selected, i.e. if the flash buttons were pressed in the following order 1-4-6-2-9-12-10 then the chase pattern would run through the channels in that order.

This configuration may now be used by pressing the «CHANNELS» button again. The channel range will not change until the button is pressed.

Speed Control

This control is used to select the step rate of the Effect section output. It's range covers approximately one step every 0,1 second, at the top of it's travel (MAX.) to one step every 2 seconds near the bottom of it's travel. If the control is moved to the very bottom of it's travel, then the chase will be HELD and the output can be stepped though manuallly using the «START/STEP» button. The LED above the control will flash in time with the selected chase speed (one flash per step) unless it is in the manual step mode in which case the LED will be on only while the « START/STEP» button is pressed.

START/STEP Button

If the SPEED control is in the HOLD position then the «START/STEP» button will advance the current Effect sequence one step for every press of the button. If the SPEED control is in any other position then pressing the «START/STEP» button will have a different use. In this instance when the button is pressed the current Effect will be held. This is confirmed by the SPEED LED being lit continuously. The blackout will be enabled (the on/off LED will go off), and the Effect will be reset to it's first step.

A Second press of the button will restart the Effect from the beginning and remove the blackout. If whilst the Effect is held the «ON/OFF» button is pressed instead of the «START/STEP» button then the chase output will be turned on but the chase would remain held.

Level Control

The LEVEL control regulates the output level from the Effect section.
If the «ON/OFF» button has been pressed then this control makes no difference to the visible output of the desk.

ON/OFF Button

All the «ON/OFF» buttons on the desk have the same basic effect.
They remove the effect of their associated section from the output on the stage, whithout effecting the processing of that section, i.e. in the Effect section if the «ON/OFF» button is pressed then the sections effect on the stage output is lost but the chase sequence will continue. A press of the «ON/OFF» button is confirmed by it's LED going out, another press of the button will reverse this action. To confirm, when the LED is OFF then the on/off is in operation, i.e. no output from that section will reach the stage. All «ON/OFF» buttons act with a toggle action, i.e. one press for ON, the next press for OFF, press again for ON…

Direction Button

This button (shown as two arrow heads) has two LED's associated with it. One indicates a right to left (BACKWARDS) direction, the other a left to right (FORWARDS) direction.

Pressing the direction button will cause the current Effect to travel from left to right (FORWARDS LED lit). Another press will cause the Effect to travel from right to left (BACKWARDS LED lit). A further press will cause the Effect to «bounce», to travel alternately backwards then forwards (both LED's are lit). Pressing the key will cycle through these three options.

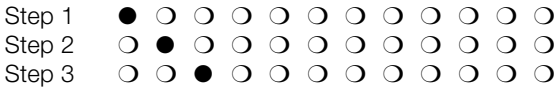
Mode Button

This button allows the selection of the required chase pattern.
Simply press the «MODE» button once and then the «FLASH» button corresponding to the pattern required. On both the BOLERO 12 and BOLERO 24 «FLASH» buttons 1 to 12 select chase patterns 1 to 12. On the BOLERO 24 the additional «FLASH» buttons are used to select patterns 13 to 24 on «FLASH» buttons 13 to 24 respectively.

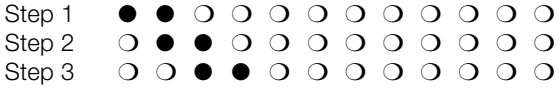
Those patterns are shown opposite :

- ● = Light ON
- ❍ = Light OFF

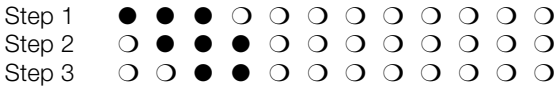
Chase Pattern 1



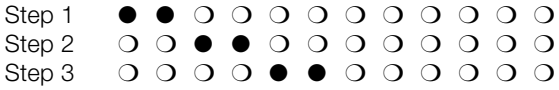
Chase Pattern 2



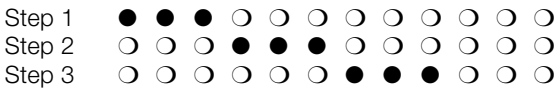
Chase Pattern 3



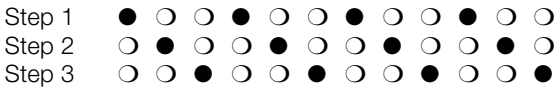
Chase Pattern 4



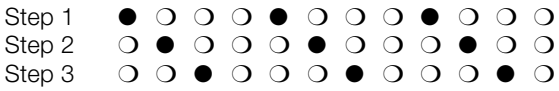
Chase Pattern 5



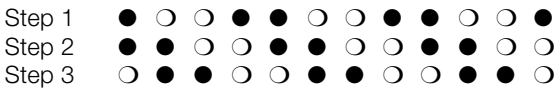
Chase Pattern 6



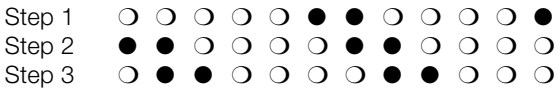
Chase Pattern 7



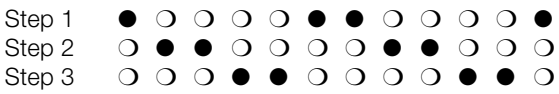
Chase Pattern 8



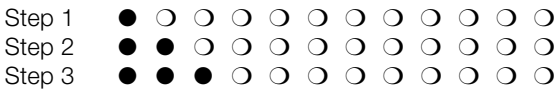
Chase Pattern 9



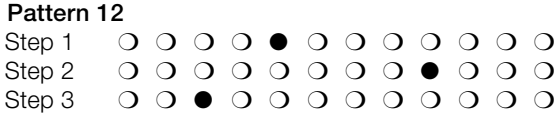
Chase Pattern 10



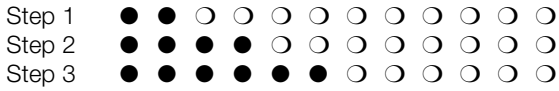
Chase Pattern 11



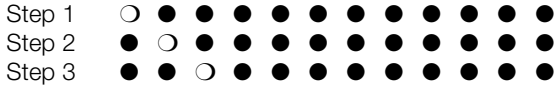
Chase Pattern 12



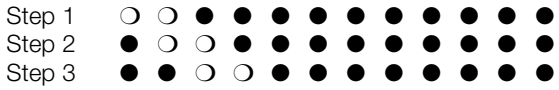
Chase Pattern 13



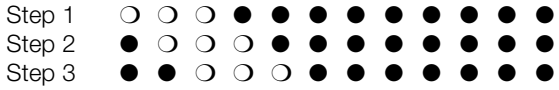
Chase Pattern 14



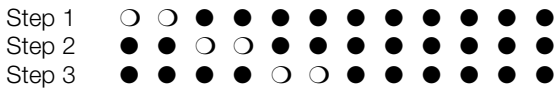
Chase Pattern 15



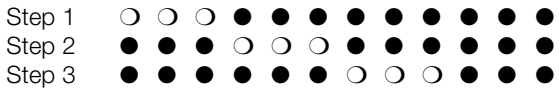
Chase Pattern 16



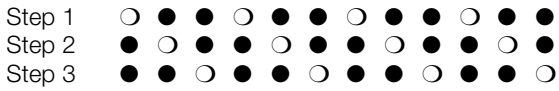
Chase Pattern 17



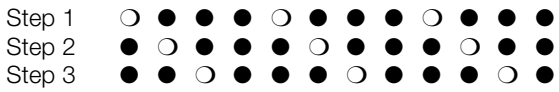
Chase Pattern 18



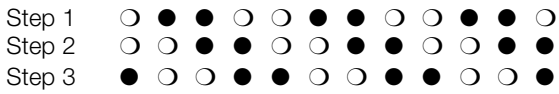
Chase Pattern 19



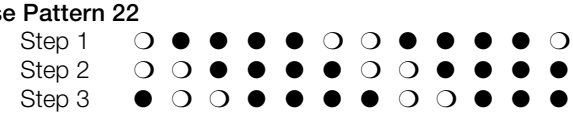
Chase Pattern 20



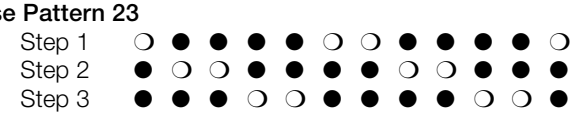
Chase Pattern 21



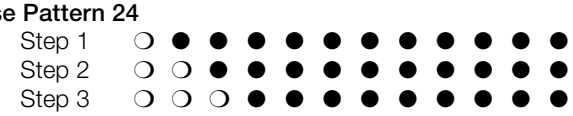
Chase Pattern 22



Chase Pattern 23



Chase Pattern 24



Remote Control (option)

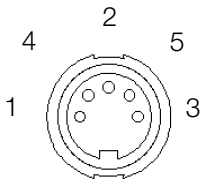
One of the options available for the BOLERO is the ability to remotely use the Effect section START/STEP button.

This operation is identical to that button on the desk itself, and is detailed in the relevant section of the manual. No button has preference over the other.

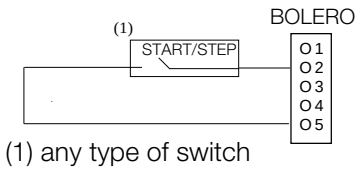
The remote control is plugged into the AUX socket on the back panel. The remote START/STEP button will short pins 2 and 4 when used.

If either of the START/STEP buttons (desk or remote) are pressed and held the operation of the other button is not impaired, as it is the initial press that initiates the action.

AUX DIN 5



2 = STEP
4 - 5 = 0V



(1) any type of switch

Analogue Output (option)

The option of analogue output, in addition to the standard DMX512/1990 output, is available in one of two formats. Either as a current driven output (0 to 370uA) or as a voltage driven output (0 to +10V).

If the analogue output option is fitted then the output format will be marked on the back panel, with a mark in the appropriate box.

0-370µA	X
0-10V	

Analogue Output Card Installation Instruction

This assembly and desk contain static sensitive components. Installation should be undertaken using appropriate precautions.

Turn the desk over onto it ' s front and remove the rear cover plate. Put this and the screws carefully to one side, to refit later.

Using a sharp scalpel, or similar, cut out either one or both of the analogue output connector positions in the rear connector panel of the control desk. Make sure the scalpel blade is kept tight against the metal chassis to ensure a clean cut edge is achieved.

Carefully remove the analogue output card from it's anti-static protective bag.
Remove the small hexagonal screws in the front face of the twenty five way output connectors and put carefully to one side.

The analogue board is normally configured as voltage driven outputs (0 to +10V). If you wish to configure it as current driven outputs (0 to 370μA), you must replace the 120 Ω resistors by the 27K resistors, delivered with the board, as 16-contact chips (DIL's)

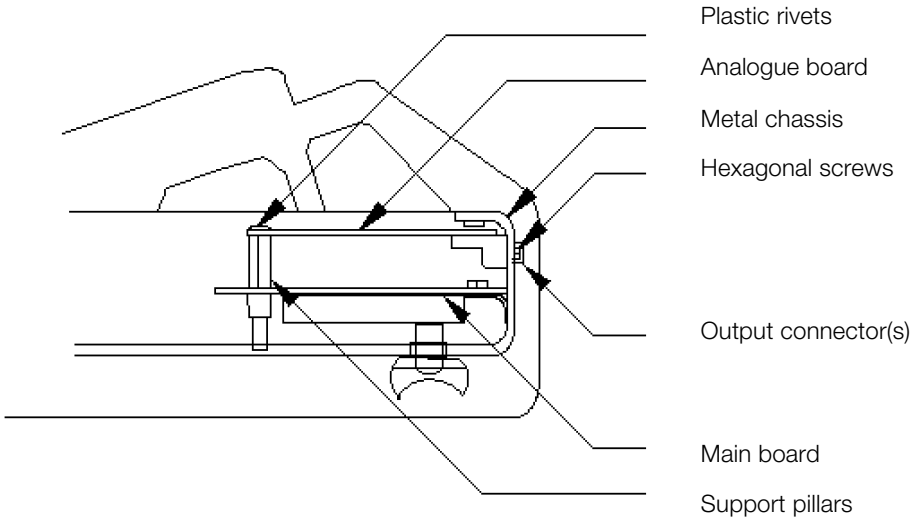
Hold the analogue board upside down, i.e. with the components facing the table top and the flying lead running under the board.Insert the output connector(s) through the cut-out(s) in the rear connector panel and push the two plastic support pillars firmly through the two mating holes in the main board in the desk.
The pillars should snap into place.

The small hexagonal screws removed earlier can now be screwed back into the output connector(s), through the rear panel, to hold the board securely in place.

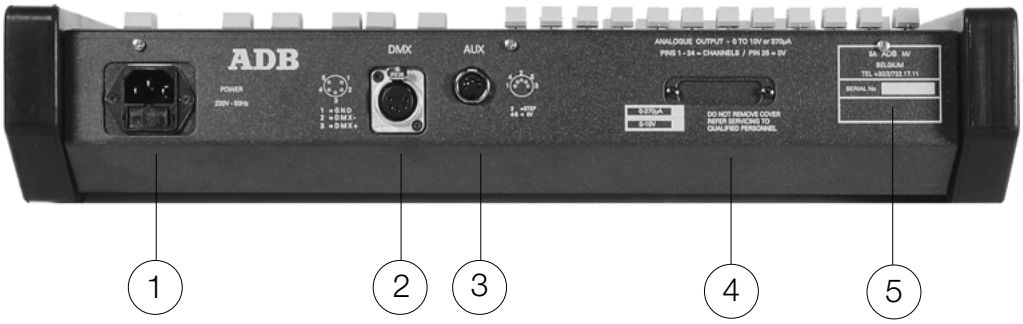
Plug the flying lead connector into the ten way header on the master board.

Replace the rear cover.

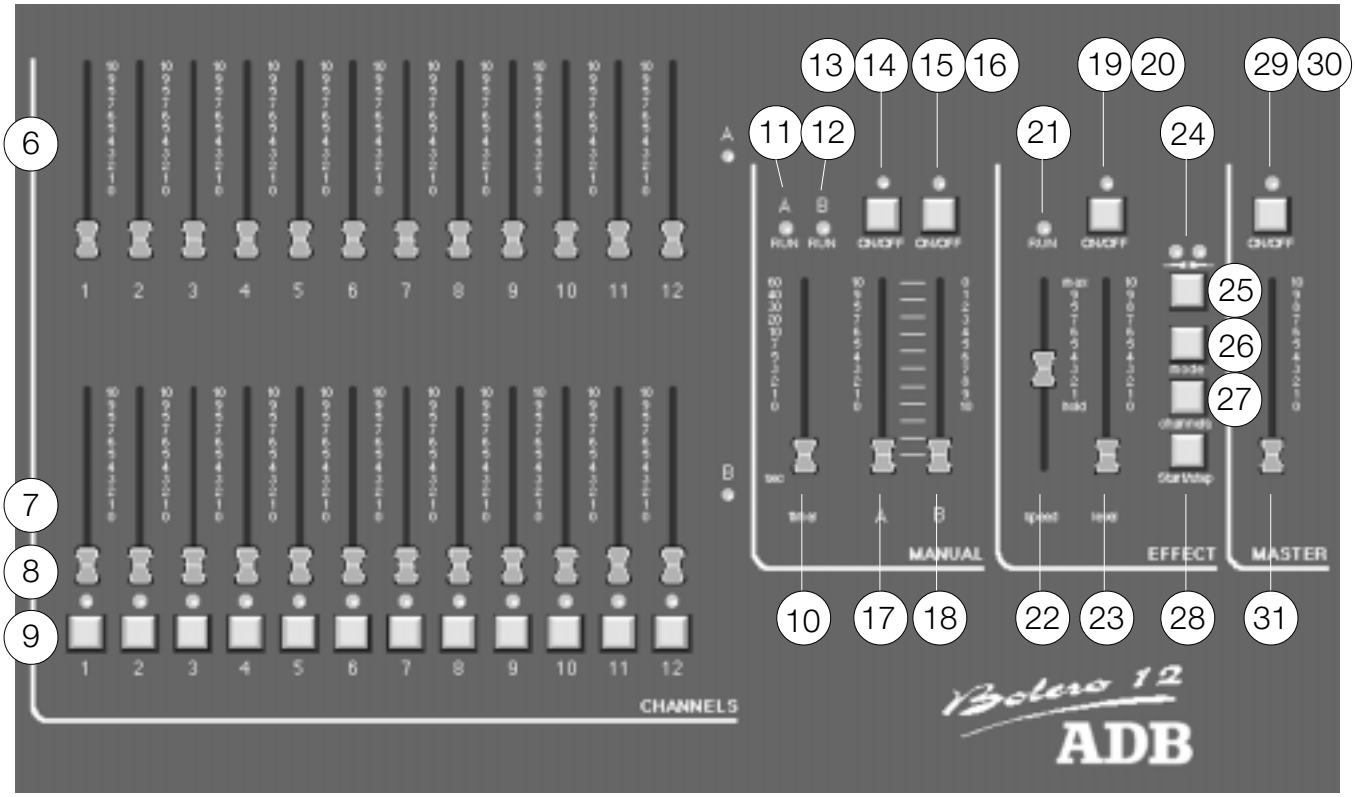
Selectional view of output board fitted into desk



Rear View



Front View



Controls, Indicators and Connectors

Rep.	Description
1	POWER socket (230 V)
2	DMX 512/1990 output connector (5 pin female 'D' type XLR)
3	AUX input socket (5 pin female DIN connector)
4	Analogue output connectors (optional)
5	SERIAL No ---
6	Preset A manual faders
7	Preset B manual faders
8	Preset LED indicators
9	Preset Flash buttons
10	Manual section TIMER fader
11	Preset A RUN LED
12	Preset B RUN LED
13	Preset A ON/OFF LED
14	Preset B ON/OFF LED
15	Preset A ON/OFF button
16	Preset B ON/OFF button
17	Preset A section fader
18	Preset B section fader
19	Effect's section ON/OFF LED
20	Effect's section ON/OFF button
21	Effect's section cross-fade RUN LED
22	Effect's section SPEED fader
23	Effect's section LEVEL fader
24	Effect's section Direction indicator LED's
25	Effect's section DIRECTION button
26	Effect's section MODE button
27	Effect's section CHANNELS button
28	Effect's section START/STEP button (operation depends on position of SPEED fader)
29	Master section ON/OFF LED
30	Master section ON/OFF button
31	Desk output Master level fader

In Case of Difficulty

FAULT	POSSIBLE REMEDIES
Desk fails to come on.	Is power supply plugged into desk correctly ? Is power supply connected to mains supply ? Is mains supply switched on ?
Manual section faders do not produce an output when pushed up.	Has the Manual section been blacked out ? (ON/OFF) Has the Master section been blacked out ? (ON/OFF) Is the Master section fader off of 0 ?
Manual section LED's do not mimic fader operation.	Has the Manual section been blacked out ? (ON/OFF) Has the Master section been blacked out ? (ON/OFF) Is the Master section fader off of 0 ?
Effects section Step button has no effect.	Speed fader not set at bottom of it's travel.
No output from Effect section.	Has the effect section been blacked out ? (ON/OFF) Has the Master section been blacked out ? (ON/OFF) Is the Master section fader off of 0 ? Is the Level fader off of 0 ?

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